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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/828,893 | 04/20/2004 | Ronald J. Yaeger | P-B199-CIP | 5851 |

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Mr. Ronald J. Yaeger
4201 Tomberra Way
Dallas, TX 75220

02/11/2011

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| EXAMINER |
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COLE, ELIZABETH M

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| ART UNIT | PAPER NUMBER |
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1798

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02/11/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/828,893 | Applicant(s) YAEGER ET AL. | |
| | Examiner Elizabeth M. Cole | Art Unit 1798 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-16,25,26,28 and 33-46 is/are pending in the application.
- 4a) Of the above claim(s) 25,26,28,33,35-37 and 39-43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38 is/are allowed.
- 6) ☒ Claim(s) 1, 4-16, 34, 44-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1798

1. Claims 1-2, 4-17, 19-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the limitation that the continuous phase comprises amorphous polymers, or that the cationic polymers comprise at least one cationic functional group or wherein the continuous phase has an overall cationic charge. The specification does not state whether the polymers are amorphous, crystalline or semi crystalline and does not refer to cationic functional groups or to the polymer being a cationic polymer. The specification does state that preferred polymers comprise cationic groups, (paragraph 061). The specification at paragraph 0060 states that the “the choice of polymers that are generally cationic in nature” is taught in order to repel positively charged ions and particles in the water. However, this is not the same as having a cationic charge or having cationic functional groups or an overall cationic charge.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1798

3. Claims 1, 4-16, 34, 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosatte et al, U.S. Patent No. 6,228,506 in view of Herbst et al, U.S. Patent No. 6,585,989. Hosatte discloses a composite enthalpy exchanges which comprises a corrugated fibrous sheet which is impregnated with a cationic polymeric material. The cationic polymeric material may comprise polyacrylates. See col. 5, lines 19-30. The instant specification teaches that polyacrylates meet the claimed properties and solubility parameters, etc. The specification discloses these resins as having suitable non polar solubility parameter, the polar solubility parameter, the hydrogen bond solubility parameter, the surface tension, interfacial tension, (see for example the discussion at Table 3 regarding polyacrylates. Therefore, since Hosatte discloses the same materials, it is reasonable to presume that the materials of Hosatte would meet the claimed property limitations. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP §§ 2112- 2112.02. Since Hosatte et al discloses a fibrous material impregnated with the resins set forth in the specification, it is reasonable to expect that these resins have the same properties as the claimed resins.

4. The enthalpy exchanger of Hosatte et al is equated with the claimed evaporative cooler.

Art Unit: 1798

5. . Hosatte differs from the claimed invention because it does not disclose that the polymeric material is a blend of polyamideimide and polystyrene and optionally polybutadiene. Herbst discloses blends of polyamideimide and polystyrene and polybutadiene which can be used to form air conditioning components such as films for use in ventilation systems, air cleaning and air conditioning systems. See col. 3, lines 41-48, col. 13, lines 21-col. 16, line 60. Herbst teaches that the blend can be formed to produce films having high antimicrobial activity. Therefore, it would have been obvious to have employed the particular polymer blend of Herbst in the structure of Hosatte, in order to provide a film for use in air conditioning and ventilation systems which had a high degree of antimicrobial activity. With regard to the particular amounts of the polyamideimide, polybutadiene and polystyrene, it would have been obvious to have optimized the amounts of the components used through the process of routine experimentation in order to arrive at a material having the desired properties. It is noted that support for the limitations of claim 33 are not found in parent application 09/426,228 filed 10/22/99 and thus Herbst is applicable as prior art.

6. Claim 38 is allowed.

7. Applicant's arguments filed 1/24/11 have been fully considered but they are not persuasive.

8. Applicant's amendment has overcome the 112 2nd paragraph rejection for lack of antecedent basis. Applicant argues that the subject matter purportedly not described in the specification is captured in withdrawn claims rendering the

Art Unit: 1798

written description requirement rejection moot. However, claim 1 still includes the recitation of cationic amorphous polymers to give an overall positive charge as set forth above and claim 1 is not a withdrawn claim and therefore the rejection is maintained.

9. With regard to the 103 rejection, Applicant argues that the applied art does not meet all the claim limitation and that the examiner has not provided the proper analysis supporting the rationale why a person skilled in the art would have combined the references. However, the instant specification states that the particularly claimed polymers meet the limitations regarding molecular weight, interfacial tension, non polar solubility parameter, polar solubility parameter and hydrogen bond solubility parameter. The specification lists polymers which meet the claimed requirements as including polyamideimide, polystyrene and polybutadiene. Therefore, it is reasonable to expect that since Herbst teaches the claimed polymers and employing them in a blend that the resulting materials would have the same properties, since the specification teaches that they have the same properties and does not teach that the properties are the result of any processing or other parameters which change the properties to those claimed.

10. Therefore, the combination of Hosatte and Herbst teaches the claimed invention and the rejection is maintained.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is

Art Unit: 1798

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Angela Ortiz may be reached at (571) 272-1206.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1798